

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 6. (Canceled)

7. (New) An exchange coupled to extension telephones, a public network, and a line concentrator and connecting an IP terminal unit to a packet network through the line concentrator, said exchange comprising:

a channel accommodating portion for accommodating said extension telephones, coupled to said public network, and transmission processing voice communication data between an extension telephone or said public network and an IP terminal unit; and

a call control portion for integrally managing call control information related to the communication between said extension telephone and said IP terminal unit and controlling, based on the call control information, said channel accommodating portion to perform the transmission processing of said communication voice data, wherein

(a) when a voice communication is performed between an extension telephone or said public network and an IP terminal unit:

said channel accommodating portion, when receiving call control information from said extension telephone or said public network, changes the call control information to a packet and transmits the packet to said call control portion through said packet network;

said call control portion, when receiving the call control information converted to the packet from said channel accommodating portion, according to the call control information, notifies said channel accommodating portion of a destination address of the voice communication data which said channel accommodating portion receives from said extension telephone or said public network;

said channel accommodating portion, when receiving the destination address from said call control portion, converts the voice communication data transmitted from said extension telephone or said public network to a packet, transmits the packet to said destination address, and performs the voice communication between said extension telephone or said public network and said IP terminal unit; or

(b) when a voice communication is performed between two IP terminal units each other:

said call control portion, when receiving call control information from a IP terminal unit through said packet network, according to the call control information, notifies said IP terminal unit and an IP terminal unit as an opposite party of a destination address of said voice communication data, thereby performs the voice communication between said two IP terminal units.

8. (New) An exchange according to claim 7, wherein when the number of said extension telephones or said public network increases, a plurality of channel accommodating portions can be added.

9. (New) An exchange according to claim 7, wherein said call control portion, in case that the number of said extension telephones and said public networks to be accommodated is increased, connects a plurality of channel accommodating portions to said packet network and performs management of call control information with said plurality of channel accommodating portions and performs data transfer control.

10. (New) An exchange according to claim 7, further comprising a call control portion transferring packet data received from one-side IP network adapted terminal connected with said packet network to a specified other-side IP network adapted terminal according to call control information received from said one-side IP network adapted terminal, and transferring packet data received from said other-side IP network adapted terminal to said one-side IP network adapted terminal.

11. (New) An exchange according to claim 8, wherein said call control portion, in case that the number of said extension telephones and said public networks to be accommodated is increased, connects a plurality of channel accommodating portions to said packet network and performs management of call control information with said plurality of channel accommodating portions and performs data transfer control.

12. (New) An exchange according to claim 8, further comprising a call control portion transferring packet data received from one-side IP network adapted terminal connected with said packet network to a specified other-side IP network adapted terminal according to call control information received from said one-side IP network adapted terminal, and transferring packet data received from said other-side IP network adapted terminal to said one-side IP network adapted terminal.

13. (New) An exchange method for an exchange coupled to extension telephones, a public network, and a line concentrator and connecting an IP terminal unit to a packet network through the line concentrator, said exchange method comprising:

accommodating, via a channel accommodating portion, said extension telephones, coupled to said public network, and transmission processing voice communication data between an extension telephone or said public network and an IP terminal unit;

integrally managing, via a call control portion, call control information related to the communication between said extension telephone and said IP terminal unit and controlling, based on the call control information, said channel accommodating portion to perform the transmission processing of said communication voice data, wherein

(a) when a voice communication is performed between an extension telephone or said public network and an IP terminal unit, the method further comprising:

receiving, by said channel accommodating portion, call control information from said extension telephone or said public network;

changing the call control information to a packet and transmitting the packet to said call control portion through said packet network;

receiving, by said call control portion, the call control information converted to the packet from said channel accommodating portion,

notifying, according to the call control information, said channel accommodating portion of a destination address of the voice communication data which said channel accommodating portion receives from said extension telephone or said public network;

receiving, by said channel accommodating portion, the destination address from said call control portion, converting the voice communication data transmitted from said extension telephone or said public network to a packet, transmitting the packet to said destination address, and performing the voice communication between said extension telephone or said public network and said IP terminal unit; and wherein,

(b) when a voice communication is performed between two IP terminal units each other, the method further comprising:

receiving, by said call control portion, call control information from a IP terminal unit through said packet network, according to the call control information;

notifying said IP terminal unit and an IP terminal unit as an opposite party of a destination address of said voice communication data; and
performing the voice communication between said two IP terminal units.

14. (New) An exchange method according to claim 13, wherein when the number of said extension telephones or said public network increases, the method further comprises adding a plurality of channel accommodating portions.